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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,010	11/13/2001	Tetsuyoshi Inoue	204552021700	6384

7590 11/19/2002

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EXAMINER

NGUYEN, TUAN N

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 11/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,010

Applicant(s)

INOUE ET AL.

Examiner

Tuan N Nguyen

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/13/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09 987 010, filed on November 13, 2001.

Drawings

2. Acknowledge the drawings were received on November 13, 2001.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or non-obviousness.
4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable Hainz et al. (US 5138428) in view of Applicant own admission.

With respect to claims 1, 2, 3, 4 Hainz et al. ('428) shows in figures 1,7 and discloses in column 1-2 a semiconductor component (fig 1: 1) mount on a base (fig 1: 2) having paste (fig 1: 3) provide between semiconductor component and the base, wherein the bonding temperature is approximately 370 degree C (col 1: 14-16). He further discloses the thick gold paste layer of 2-5um is being used, where solder is pressed out and creep out to reduce stress between the semiconductor and the base (col 2: 8-18), and curing of solder at room temperature (col 2: 21-22). However, Hainz did not disclose the thermal resistance of the semiconductor laser device is 90 degree C/W or lower. Based non applicant own admission in page 4, of prior problem in semiconductor using indium having thermal resistance about 60 degree C/W, while semiconductor using silver paste has thermal resistance of 100 degree C/W or higher; It would have been obvious to one of ordinary skill in the art to provide Hainz et al. with the semiconductor laser device having thermal resistance of 90 degree C/W or lower as disclosed by the Applicant. Since claim 1 recites the same or identical elements/limitations it is inherent to use patents ('428) to recite the method of manufacturing semiconductor laser device, product by process.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable Hainz et al. (US 5138428) in view of Applicant own admission and Yoshiura Masayasu (JP 08-095504).

Hainz et al. ('428) and Applicant discloses the above, except that the conductive die-bond paste is silver paste. Yoshiura Masayasu (JP 08-095504) discloses in the DETAILED DESCRIPTION section [0012] light emitting diode device mounted on a base portion by using an electrical conductive die-bond silver paste. For the benefit of using the electrical conductive

die-bond silver paste, it would have been obvious to one of ordinary skill in the art to provide Hainz et al. and Applicant the electrical conductive die-bond silver paste for bonding the two structure together.

Citation of Pertinent References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show the product of the instant invention.

Kotato (US006099678A), Kato et al. (US006349104B1), Preston et al. (US006187611B1), Suminoe et al. (US006380620B1), Takeda (US006014318A), Sota et al. (US006064111A), Ohki et al. (US006143590A), Kinsman (US006239012B1) disclose connection of laser diode device and fabrication of the same.

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (703) 605-0756. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8592 for regular communications and (703) 746-8592 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



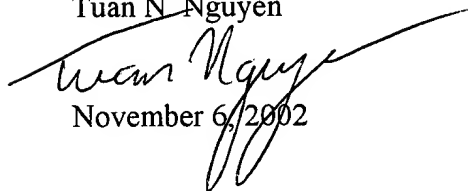
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Tuan N. Nguyen

A handwritten signature in black ink, appearing to read 'Tuan N. Nguyen', written over the printed name and date.

November 6, 2002